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Jukka Suonvieri

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EXAMINER

MATTIS, JASON E

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JUKKA SUONVIERI

Appeal 2009-000141
Application 09/744,750
Technology Center 2400

Decided: December 14, 2009

Before KENNETH W. HAIRSTON, JOHN C. MARTIN,
and MAHSHID D. SAADAT, *Administrative Patent Judges*.
HAIRSTON, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134 from a final rejection of claims 1 to 9, 11, and 12. We have jurisdiction under 35 U.S.C. § 6(b).

We will sustain the obviousness rejections.

Appellant has invented a method and system of using a subscriber station management system in a radio communication system to control and supervise a radio repeater (Figs. 2 to 4; Spec. 1 to 4 and 7 to 9).

Claim 1 is illustrative of the claimed invention, and it reads as follows:

1. A method of controlling a radio repeater in a radio communication system comprising network elements and subscriber stations in data transmission connection with each other via said radio repeater, and a subscriber station management system supervising and controlling the operation of the subscriber stations by control signals transmitted via a radio path, wherein

said radio repeater is provided with a radio receiver for receiving radio signals and with a radio transmitter for transmitting said received signals to the subscriber stations, and said radio repeater is connected to a subscriber station that is one of the subscriber stations,

control means for controlling and supervising the radio repeater, and the radio repeater is controlled by means of the subscriber station management system by transmitting control signals from the subscriber station management system via a radio path to the control means, in response to which control signals the control means control and supervise the operation of the radio repeater such that the frequency channels received by the radio receiver and the frequency channels used by the radio transmitter change.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Treatch	US 5,898,382	Apr. 27, 1999
Rhodes	US 5,909,437	Jun. 1, 1999
Laham	US 6,160,992	Dec. 12, 2000 (filed Oct. 31, 1996)

Archambaud

US 6,304,560 B1

Oct. 16, 2001
(filed Sep. 30, 1997)

The Examiner rejected claims 1 to 5, 7 to 9, and 12 under 35 U.S.C. § 103(a) based upon the teachings of Rhodes, Laham, and Treatch.

The Examiner rejected claims 6 and 11 under 35 U.S.C. § 103(a) based upon the teachings of Rhodes, Laham, Treatch, and Archambaud.

Appellant argues that “the applied art, either alone or in combination, does not teach or suggest a method . . . wherein among other features, ‘ . . . *the radio repeater is controlled by means of the subscriber station management system by transmitting control signals from the subscriber station management system via a radio path to the control means, in response to [said] control signals the control means control and supervise the operation of the radio repeater such that the frequency channels received by the radio receiver and the frequency channels used by the radio transmitter change*’” (Supp. App. Br. 11).

ISSUE

Has Appellant demonstrated that the Examiner erred by finding that the applied prior art references teach or suggest the claimed radio repeater controlled by a subscriber station management system by transmitting control signals from the subscriber station management system via a radio path to a control means that controls and supervises the operation of the radio repeater such that the frequency channels received by the radio receiver and the frequency channels used by the radio transmitter change?

FINDINGS OF FACT (FF)

1. The Examiner acknowledges (Ans. 5, 6) that Rhodes does not disclose: (i) a radio repeater provided with a radio receiver for receiving radio signals and a radio transmitter for transmitting the received signals to subscriber stations, and (ii) “supervising the operation of the radio repeater such that the frequency channels received by the radio receiver and the frequency channels used by the radio transmitter change.”

2. Laham describes a method and system for controlling a radio repeater 30 in a radio communications system (Figs. 5 and 6). The repeater 30 relays communication signals between communication site 8 and a remote user/subscriber 28 in an area that cannot be adequately covered by direct communication with site 8 (col. 2, ll. 48 to 61). The repeater 30 is a subscriber station that is configured as a repeater (col. 5, ll. 63 to 66). The control means/subscriber station management system for controlling the remote user/subscriber 28 and repeater 30 is communication center 2 which receives control information from MCRT 20 (col. 6, ll. 13 to 19; col. 6, l. 66 to col. 7, l. 2). The radio paths between the repeater 30 and the control means are designated by numerals 22, 24, 26, 36, and 38 (col. 5, l. 19 to col. 6, l. 26). Each remote user/subscriber 28, and the repeater 30, is configured as a transmitter and a receiver (col. 5, ll. 63 to 66).

3. The Examiner acknowledges (Ans. 9) that “Laham et al. does not specifically disclose that the control signals are used to change the frequency channels used by the receiver and transmitter of the repeater.”

4. Trench describes the use of a central control computer 41 in a communication system for dynamically changing the channel frequency of a repeater to avoid channel conflicts (Fig. 4; col. 3, ll. 49 to 62).

5. Archambaud describes plural communication stations in a wireless local loop (WLL) 16, and the attendant advantages of a WLL (e.g., terminal mobility/deployment and alternative to cables) (Figs. 2 and 3; col. 1, ll. 26 to 32; col. 4, ll. 16 to 25).

PRINCIPLES OF LAW

The Examiner's "articulated reasoning . . . in the rejection must possess a rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

ANALYSIS

We agree with the Examiner that the claimed invention is either taught by or would have been suggested by the applied references.

Turning first to claims 1, 4, and 9, Laham describes all of the claimed subject matter set forth in these claims with the exception of changing frequency channels of the repeater transmitter and the repeater receiver (FF 2 and 3). We agree with the Examiner (Ans. 10) that it would have been obvious to the skilled artisan to modify the repeaters in the Laham communication system with the teachings of Trench to allow the frequency pattern of the repeaters in the Laham wireless system to be changed without physically accessing the repeaters, and for the additional benefit of avoiding channel conflicts between the repeaters (FF 4). We disagree with

Appellant's argument (Sup. App. Br. 12 and 13) that the Examiner has not provided a rational reason to combine the teachings of the applied references. Appellant's arguments (Supp. App. Br. 10 to 15) that the computer 41 in Treatch does not transmit wireless radio control signals is not convincing of the nonobviousness of the claimed invention because the Examiner relied on Laham for a teaching of using radio control signals for communication between a control means and a repeater (Ans. 8 and 9).

Thus, we will sustain the obviousness rejection of claims 1, 4, and 9. We will likewise sustain the obviousness rejection of claims 2, 3, 5, 7, 8, and 12 because Appellant has not presented any patentability arguments for these claims apart from the arguments presented for claims 1, 4, and 9.

Turning lastly to claims 6 and 11, we will sustain the obviousness rejection of these claims because we agree with the Examiner (Ans. 14 and 15) that it would have been obvious to the skilled artisan to implement the communication system described by Laham and Treatch in WLL as taught by Archambaud for the noted advantages of WLL (FF 5).

In summary, the Examiner's articulated reasoning in the rejections possesses a rational underpinning to support the legal conclusion of obviousness. *In re Kahn*, 441 F.3d at 988.

CONCLUSION OF LAW

Appellant has not demonstrated that the Examiner erred by finding that the applied prior art references teach or suggest the claimed radio repeater controlled by a subscriber station management system by transmitting control signals from the subscriber station management system

via a radio path to a control means that controls and supervises the operation of the radio repeater such that the frequency channels received by the radio receiver and the frequency channels used by the radio transmitter change.

ORDER

The obviousness rejections of claims 1 to 9, 11, and 12 are affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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